



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,973	11/05/2007	Greg Baiden	1688-5/MBE	3409
38735	7590	06/22/2010	EXAMINER	
DIMOCK STRATTON LLP			PHAN, HANH	
20 QUEEN STREET WEST, 32nd FLOOR, BOX 102			ART UNIT	PAPER NUMBER
TORONTO, ON M5H 3R3			2613	
CANADA				
MAIL DATE		DELIVERY MODE		
06/22/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/596,973	BAIDEN, GREG
	Examiner Hanh Phan	Art Unit 2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 05 November 2007.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-20 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 30 June 2006 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/US/06)  
 Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al (US Patent No. 5,894,450) in view of Weid et al (Weid et al: "Underwater Cableless Data Transmission", Oceans '93, 'Engineering in Harmony with Ocean', pages 191-193).

Regarding claims 1 and 15, referring to Figure 1, Schmidt et al teaches a communications system comprising a control station (i.e., central station 30, Fig. 1) for transmitting control data, comprising:

a plurality of beacons (i.e., network nodes 10-14, Fig. 1) dispersed about a communications zone; and

at least one submersible craft (i.e., underwater vehicles 22-26, Fig. 1) comprising a plurality of light receiving elements positioned so that the craft receives

light from a plurality of directions (i.e., Fig. 1, col. 4, lines 14-50, col. 6, lines 42-67, col. 7, lines 1-67, and col. 8, lines 1-62).

Schmidt et al differs from claims 1 and 15 in that he fails to specifically teach at least some of the beacons comprising one or a plurality of light-emitting elements positioned so that each beacon emits light in a plurality of directions whereby, and when the submersible craft is in the communications zone the submersible craft is in optical communication with at least one beacon for receiving control data from the at least one beacon. Weid et al, from the same field of endeavor likewise teach underwater optical communication (i.e., Figures 1 and 2). Weid et al further teaches at least some of the beacons comprising one or a plurality of light-emitting elements positioned so that each beacon emits light in a plurality of directions whereby, and when the submersible craft is in the communications zone the submersible craft is in optical communication with at least one beacon for receiving control data from the at least one beacon (i.e., see Figures 1 and 2, see abstract section and see pages 191-193). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the at least some of the beacons comprising one or a plurality of light-emitting elements positioned so that each beacon emits light in a plurality of directions whereby, and when the submersible craft is in the communications zone the submersible craft is in optical communication with at least one beacon for receiving control data from the at least one beacon as taught by Weid et al in the system of Schmidt et al. One of ordinary skill in the art would have been motivated

to do this since allowing providing an wireless optical communication for underwater with high speed and high capacity.

Regarding claims 2 and 16, the combination of Schmidt et al and Weid et al teaches wherein at least some of the light beacons comprise light receiving elements positioned so that each beacon receives light from a plurality of directions and the at least one submersible craft comprises one or a plurality of light-emitting elements positioned so that the craft emits light in a plurality of directions, whereby when the submersible craft is in the communications zone the submersible craft is in optical communication with at least one beacon for sending data to the at least one beacon for transmission to the control station (i.e., Fig. 1 of Schmidt et al, and see Figures 1 and 2 of Weid et al, see abstract section and see pages 191-193).

Regarding claim 3, the combination of Schmidt et al and Weid et al teaches wherein the light beacons comprise substantially spherical light beacons (i.e., Fig. 1 of Schmidt et al, and see Figures 1 and 2 of Weid et al, see abstract section and see pages 191-193).

Regarding claim 4, the combination of Schmidt et al and Weid et al teaches wherein the one or a plurality of light elements comprises an elongated light element extending around a body of the light beacon (i.e., Fig. 1 of Schmidt et al, and see Figures 1 and 2 of Weid et al, see abstract section and see pages 191-193).

Regarding claim 5, the combination of Schmidt et al and Weid et al teaches wherein the light emitting elements comprise point light sources distributed about a

body of the light beacon (i.e., Fig. 1 of Schmidt et al, and see Figures 1 and 2 of Weid et al, see abstract section and see pages 191-193).

Regarding claim 6, the combination of Schmidt et al and Weid et al teaches wherein the light emitting elements comprise optical fibres mounted to the body (i.e., Fig. 1 of Schmidt et al, and see Figures 1 and 2 of Weid et al, see abstract section and see pages 191-193).

Regarding claim 7, the combination of Schmidt et al and Weid et al teaches wherein at least some of the light beacons comprise multi-faceted bodies (i.e., Fig. 1 of Schmidt et al, and see Figures 1 and 2 of Weid et al, see abstract section and see pages 191-193).

Regarding claim 8, the combination of Schmidt et al and Weid et al teaches wherein at least some of the light beacons are anchored to a floor or bed of a body of water (i.e., Fig. 1 of Schmidt et al, and see Figures 1 and 2 of Weid et al, see abstract section and see pages 191-193).

Regarding claim 9, the combination of Schmidt et al and Weid et al teaches wherein at least some of the light beacons are suspended in a body of water by a floating object comprising a power source for energizing the light beacons (i.e., Fig. 1 of Schmidt et al, and see Figures 1 and 2 of Weid et al, see abstract section and see pages 191-193).

Regarding claims 10, 17 and 18, the combination of Schmidt et al and Weid et al teaches wherein the floating object comprises a communications relay for relaying communications signals from the submersible craft to the light beacon to a radio

frequency antenna or satellite, and for relaying communications signals from a remote control station to the light beacon via an radio frequency antenna or satellite for controlling the submersible craft (i.e., Fig. 1 of Schmidt et al, and see Figures 1 and 2 of Weid et al, see abstract section and see pages 191-193).

Regarding claim 11, the combination of Schmidt et al and Weid et al teaches wherein the light bacons are suspended at different depths (i.e., Fig. 1 of Schmidt et al, and see Figures 1 and 2 of Weid et al, see abstract section and see pages 191-193).

Regarding claims 12 and 19, the combination of Schmidt et al and Weid et al teaches wherein light signals are emitted by the light beacons at a first frequency and light signals are emitted by the at least one submersible craft at a second frequency that does not interfere with communications at the first frequency (i.e., Fig. 1 of Schmidt et al, and see Figures 1 and 2 of Weid et al, see abstract section and see pages 191-193).

Regarding claims 13 and 20, the combination of Schmidt et al and Weid et al teaches comprising a plurality of submersible crafts and wherein each submersible comprises a unique address for receiving data from the control station (i.e., Fig. 1 of Schmidt et al, and see Figures 1 and 2 of Weid et al, see abstract section and see pages 191-193).

Regarding claim 14, the combination of Schmidt et al and Weid et al teaches comprising a plurality of submersible crafts and wherein each submersible craft transmits a data signal comprises a unique address (i.e., Fig. 1 of Schmidt et al, and see Figures 1 and 2 of Weid et al, see abstract section and see pages 191-193).

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Antonelli et al (US Patent No. 6,813,218) discloses underwater optical transmission system.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye, can be reached on (571)272-3078. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

/Hanh Phan/

Primary Examiner, Art Unit 2613

Application/Control Number: 10/596,973  
Art Unit: 2613

Page 8